

High-Gravity Emulsification And Mass Transfer Educational Pilot Plant

Item Number: LPK-HGES



Introduction

This integrated educational pilot plant utilizes rotating packed bed technology to demonstrate high-gravity emulsification and mass transfer, providing engineering students with hands-on experience in process intensification and unit operations through a modular, customizable design with digital monitoring.

[Learn More](#)

System Component / Parameter	Technical Specification	Associated Unit Operation / Textbook Concept
High-Gravity Rotor Unit	Variable speed drive, stainless steel SUS304/316 construction	Centrifugal separation, fluid dynamics, shear-induced mixing
Feed Delivery System	Integrated dual-channel liquid metering pumps with flow control	Material balance, fluid flow measurement, continuous phase dosing
Instrumentation & Control	15.6" Touchscreen panel, wireless cloud logging, real-time tracking	Process dynamics, automated control loops, data acquisition
Safety Features	Dual over-pressure and over-temperature automated cut-offs	Process safety management, thermal runaway prevention
Frame & Mobility	Ergonomic industrial aluminum profile skid with lockable casters	Pilot plant design, spatial footprint optimization